

REMARKS

This response is submitted in response to an Office Action mailed on February 2, 2006.

Claims 1-41 were pending at the time the Office Action was issued. Applicant hereby amends independent claims 1, 9, 15, 23, 29, and 37. Applicant also hereby amends dependent claims 16 and 20 to conform with the amendments to independent claim 15, from which claims 16 and 20 depend. No claims are canceled. Thus, Claims 1-41 remain pending.

I. REJECTIONS UNDER 35 U.S.C. § 102

Claims 1-3, 6-10, 13-17, 20-24, 27-31, 34-38, and 41 were rejected under 35 U.S.C. § 102(e) as having been anticipated by U.S. Patent No. 6,619,406 to Kacyra et al. (hereinafter "Kacyra"). Applicant hereby traverses the rejection. Applicant has amended independent claims 1, 9, 15, 23, 29, and 37, as well as dependent claims 16 and 20 to conform with the amendments to independent claim 15 from which they depend, to further clarify the distinctions of the independent claims over the cited reference, and submits that the claims are allowable over the references cited for the reasons explained in detail below.

In the interest of reducing the issues to be considered in this response, the following remarks focus principally on the novelty of independent claims 1, 9, 15, 23, 29, and 37. The novelty of each of the dependent claims is not necessarily separately addressed in detail. However, applicant's decision not to discuss the differences between the cited art and each dependent claim should not be considered as an admission that applicant concurs with the conclusions set forth in the Office Action that these dependent claims are not patentable over the

disclosure in the cited reference. Similarly, applicant's decision not to discuss differences between the prior art and every claim element, or every comment set forth in the Office Action, should not be considered as an admission that applicant concurs with the interpretation and assertions presented in the Office Action regarding those claims. Indeed, applicant believes that all of the dependent claims are patentably distinguish over the references cited. Moreover, a specific traverse of the rejection of each dependent claim is not required, since dependent claims are patentable for at least the same reasons as the independent claims from which the dependent claims ultimately depend.

Applicant respectfully asserts that claim 1, as amended, is patentable over the reference cited for at least three reasons. Claim 1, as amended, is reproduced here:

1. (Currently Amended) A method for facilitating detection of an object in a point cloud of three-dimensional imaging data representing an area of study where the object potentially is obscured by intervening obstacles, the method comprising:
 - collecting a point cloud of three-dimensional imaging data representing an area of study where the object potentially is obscured by intervening obstacles;
 - processing the imaging data to identify elements in the point cloud having substantially common attributes signifying that the identified elements correspond to a feature in the area of study that is at least partially obscured by the intervening obstacles;
 - generating at least one isosurface associating the elements having substantially common attributes; and
 - generating a reversed orientation visualization model from the imaging data for a region of interest, thereby exposing the feature.

By way of introduction, applicant wishes to restate the nature of the cited reference, as explained in the abstract of Kacyra:

Methods for operating a laser scanning system. The laser scanning system can be used in construction projects to generate a

field survey. An architect or engineer can use the field survey to create construction drawings. In addition, relevant points from the construction drawings can be identified at the construction site with the scanning system. Further, earth moving equipment can be controlled using the same information. The laser scanning system can also be used to determine if two parts can be mated together by scanning and comparing the parts that are to be mated. The laser scanning system can further be used to determine if an object can be moved through an opening in a structure by comparing scan points of the structure with scan points from the object. The laser scanning system can additionally be used to identifying objects within the site, to build databases that have relevant information about the objects, and to guide reproducing machines.

Thus, the laser scanning system of Kacyra provides for a generation of a field survey to evaluate how unobstructed ground-based objects can interact with or may interfere with one another. For example, Kacyra describes a system in which it can be determined if a ground-based object can fit through an opening in a structure, or whether two ground-based objects can be mated together. By contrast, the claims of the present application are distinct from anything taught or suggested by the cited reference for at least three reasons.

First, Kacyra not only fails to describe a method of identifying a feature “in the area of study that is at least partially obscured by the intervening obstacles,” but does not even mention intervening obstacles. Respectfully, nothing in the cited passages of Kacyra listed by the Office Action supports any such identification. Further respectfully, reading any such disclosure or suggestion into what is stated in Kacyra is an extrapolation that would not support a rejection of claim 1 either on the basis of obviousness, let alone on the purported basis of anticipation. In fact, the only commonality between the cited reference and claim 1 is Kacyra’s mention that little “operator intervention” is used in guiding an earth mover, as recited by Kacyra at Column 7, Lines 9-16. Kacyra fails to teach, let

1 alone suggest, a method of identifying an object partially obscured by an
2 intervening object, and thus fails to anticipate this element of claim 1.

3 Second, whereas claim 1 expressly recites “generating a reversed
4 orientation visualization model,” Kacyra never even mentions generating a
5 reversed visualization model. In fact, Kacyra never mentions the words “reverse,”
6 “reverses,” “reversal,” or any form of the word “reversed.” Applicant therefore
7 submits that it is impossible that Kacyra teaches or suggests the generation of a
8 reversed orientation visualization model, and thus cannot possibly anticipate this
9 element.

10 Third, and only for the sake of discussion, even if the cited passage of the
11 Office Action that allegedly anticipates the generation of a reversed orientation
12 visualization model could be equated with what is recited by claim 1, claim 1 as
13 amended nonetheless patentably distinguishes over Kacyra. The Office Action
14 cites Column 3, Lines 3 through 6 of Kacyra as allegedly anticipating this element,
15 but the cited reference does not support this interpretation. Specifically, the cited
16 passage recites that Kacyra’s method “includes the steps of identifying objects
17 within the site by comparing the scan points to predefined geometric objects, and
18 issuing commands based on the identification of the objects.” (Kacyra, Column 3,
19 Lines 3-6). Respectfully, the only hypothetical parallel between the cited passage
20 and the subject element of claim 1 is that, possibly, one could *manually* compare
21 imaging data of an area with known, predefined objects and superimpose them
22 with the imaging data. However, as expressly recited by claim 1 as amended, the
23 claimed method includes “generating a reversed orientation visualization model
24 from the imaging data for a region of interest, thereby exposing the feature.”
25 Because the feature is exposed from the reversed orientation visualization model

1 to expose the feature, and not by a manual process of superimposing or adding a
2 known geometrical object to the imaging data – even if such an analogy could be
3 made – Kacyra fails to recite this element of claim 1 as amended. Thus, claim 1 as
4 amended patentably distinguishes over the cited reference.

5 Respectfully, Kacyra fails to anticipate what is recited by claim 1 for the
6 foregoing reasons. Accordingly, applicant submits that claim 1 is in condition for
7 allowance.

8 Applicant reincorporates by reference the foregoing arguments with regard
9 to independent claims 9, 15, 23, 29, and 37. Applicant respectfully submits that,
10 the cited reference fails to teach or even suggest what is recited by these claims as
11 amended. Thus, applicant respectfully submits that claims 9, 15, 23, 29, and 37
12 also are in condition for allowance over the cited reference.

13 Finally, because claims 2, 3, 6-8, 10, 13, 14, 16, 17, 20-22, 24, 27, 28, 30,
14 31, 34-36, 38, and 41 depend from and apply additional limitations to the
15 respective independent claims from which each depends, claims 2, 3, 6-8, 10, 13,
16 14, 16, 17, 20-22, 24, 27, 28, 30, 31, 34-36, 38, and 41 also are in condition for
17 allowance for at least the same reasons for which claims 1, 9, 15, 23, 29, and 37
18 are in condition for allowance.

19 Applicant respectfully submits that claims 1-3, 6-10, 13-17, 20-24, 27-31,
20 34-38, and 41 are in condition for allowance, and that the rejection under 35
21 U.S.C. § 102(e) should be withdrawn.

II. REJECTIONS UNDER 35 U.S.C. § 103

Claims 4, 5, 11, 12, 18, 19, 25, 26, 32, 33, 39, and 40 were rejected under 35 U.S.C. § 103(a) as being rendered obvious by Kacyra in further view of Foley et al., "Computer Graphics," 1990, Addison-Wesley Publishing Company, Inc., Second Edition, pages 1034-36 and 1047-48. Respectfully, because claims 4, 5, 11, 12, 18, 19, 25, 26, 32, 33, 39, and 40 depend from and apply additional limitations to the respective independent claims from which each depends, the claims are allowable for at least the same reasons as the respective claims from which each depends as previously described. Accordingly, applicant submits that the amendments to the claims, in consideration of the foregoing remarks, renders moot the rejection under 35 U.S.C. § 103(a). Thus, applicant submits that claims 4, 5, 11, 12, 18, 19, 25, 26, 32, 33, 39, and 40 are in condition for allowance, and the rejection under 35 U.S.C. § 103(a) should be withdrawn.

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